

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 6-11 and 13-16 are pending in the present application, Claims 6 and 10 having been amended, and Claims 13-16 having been added. Claims 6 and 10 are amended to correct a minor informality. Support for new Claims 13 and 14 is found, for example, in Fig. 11 and its corresponding description in the specification. Support for new Claims 15 and 16 is found, for example, in Fig. 17 and its corresponding description in the specification. Applicants respectfully submit that no new matter is added.

In the outstanding Office Action, Claims 6, 7, and 9-11 were rejected under 35 U.S.C. § 103(c) as unpatentable over Tanba (JP 2003-068862) in view of Gomez et al. (U.S. Patent No. 6,847,282, hereinafter Gomez).

Initially, it is noted that the outstanding Office Action does not provide any explanation as to how Claims 9-11 are rejected. Thus, the outstanding Office Action is deficient.

With respect to the rejection of Claim 6 as unpatentable over Tanba and Gomez, Applicants respectfully traverse this ground of rejection because the outstanding Office Action fails to provide a *prima facie* case of obviousness by asserting prior art that, no matter how the prior art references are combined, do not teach or suggest every element of independent Claim 6.

Claim 6 recites, *inter alia*,

a first shield structure provided with a second conductor interconnection in a ring having a continuous configuration provided along an outer periphery of the spiral pattern of the inductor except for an opening in a portion of the second conductor interconnection, and the second conductor interconnection is electrically connected to ground potential;

a second shield structure disposed at a layer below the first shield structure such that the first shield structure and second shield structure are in different vertical planes, the first shield structure and the second shield structure each having a perimeter that is partially opened;

the first and second shield structures are arranged such that the openings in the perimeters of the first and second shield structures are not superposed in a stacked state; and

a third shield structure disposed at a layer below the second shield structure, a perimeter of the third shield structure including an opening at a position where the perimeter of the first shield structure is open, an opening at a position where the perimeter of the second shield structure is open, and an opening at another position.

The combination of Tanba and Gomez do not disclose or suggest these elements of Claim 6.

Applicants note that Claim 6 specifically describes three shield structures that are ring shaped, and have openings in their perimeters that are not superposed in a stacked state. An object of this type of shield structure is to prevent the induced current from flowing in the shield by the electromagnetic induction from the inductor. This prevents the reduction of the inductance of the inductor.¹

Moreover, as is apparent from Table 1 (on page 22 of the specification) and Table 2 (on page 31 of the specification), the inductance of the inductor is not lowered because of the presence of shield structures.

Claim 6 describes the interrelationship of three shield structures. The three shield structures also include openings at locations specified in the claims. The outstanding Office Action acknowledges that Tanba does not disclose or suggest “that the first and second shield structures are arranged such that the openings in the perimeters of the first and second shield structures are not superposed in a stacked state.” The outstanding Office Action relies on Figs. 1B and 13 of Gomez to cure the deficiency in Tanba.

¹ Specification, page 23, line 26 to page 24, line 10.

The outstanding Office Action appears to take the position that Figs. 1B and 13 of Tanba show a ring-shaped shield structures with openings at various locations of the perimeter. Applicants respectfully traverse this position.

Fig. 1B of Gomez shows a shield structure 104a with two openings. Fig. 13 of Gomez shows another example a shield structure with one opening. However, Fig. 1B and Fig. 13 are different embodiments and are not part of the same device. Figs. 1B and 13 only show one shield structure to be used in a device. These figures of Gomez do not show any relationship between a plurality of shield structures with openings.

If the shield of Fig. 13 of Gomez is applied to the device shown in Fig. 5 of Gomez, the resulting device has a top shield pattern that is completely closed, the middle shield pattern of Fig. 13, and a bottom shield pattern 516 that is completely closed. This combination does not disclose or suggest how to position the openings when there are a plurality of shield patterns each having an opening.

Thus, Gomez does not disclose or suggest the claimed “the first and second shield structures are arranged such that the openings in the perimeters of the first and second shield structures are not superposed in a stacked state.”

Furthermore, the outstanding Office Action does not address the claimed “a perimeter of the third shield structure including an opening at a position where the perimeter of the first shield structure is open, an opening at a position where the perimeter of the second shield structure is open, and an opening an another location.”

The outstanding Office Action indicates that reference number 11 below second layer 17 of Tanba corresponds to the claimed “third shield structure.” However, Tanba does not disclose or suggest the reference number 11 below second layer 17 of Tanba includes “an opening at a position where the perimeter of the first shield structure is open, an opening at a

position where the perimeter of the second shield structure is open, and an opening at another location.”

Furthermore, Figs. 1B and 13 of Gomez do not suggest modifying the structure identified by reference number 11 below second layer 17 of Tanba. The claimed “third shield structure” requires at least three openings, and the shields in Gomez’s Figs. 1B and 13 only include two openings and one opening, respectively. Thus, Gomez does not disclose or suggest a shield structure with three openings, and does not disclose or suggest that one opening is at a position where the perimeter of the first shield structure is open, a second opening at a position where the perimeter of the second shield structure is open, and a third opening at another location.

As explained in the specification for non-limiting embodiments of the invention defined by Claim 6, the shield structures prevent induced current,² the return path of the high frequency signal can be stabilized, the electromagnetic interference between the inductor and other elements disposed around the inductor can be reduced, the inductor is prevented from changing its performance because of the electromagnetic influence from other elements disposed around the inductor, and the openings in the shields can prevent the path of the induced current from being formed in the shield in the electromagnetic induction from the inductor.³

In view of the above-noted distinctions, Applicants respectfully submit that Claim 6 (and any claims dependent thereon) patentably distinguish over Tanba and Gomez, taken alone or in proper combination.

As noted above, the outstanding Office Action did not explain the rationale for rejecting Claim 10. Claim 10 recites, *inter alia*, “a shield that is provided with a second conductor interconnection in a ring having a continuous configuration provided along an

² Specification, page 24, lines 11 to 21.

³ Specification, page 25, line 19 to page 26, line 2.

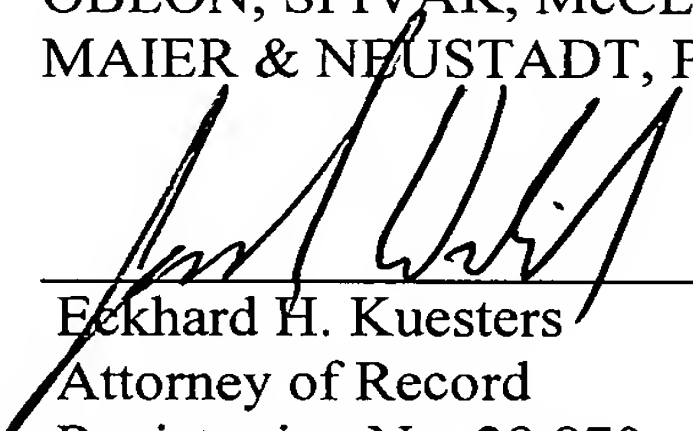
inner periphery of the spiral pattern of the inductor....” None of the devices shown in Tanba and Gomez include a shield on an inner periphery of the spiral pattern of the inductor. On the contrary, the shield in the devices of Gomez and Tanba are on an outer periphery of the spiral pattern.

Furthermore, Claim 10 recites elements similar to those noted above in Claim 6. Thus, Claim 10 further patentably distinguishes over Gomez and Tanba, taken alone or in proper combination for the reasons stated above for Claim 6.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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